

IN THE CLAIMS

Claim 1 has been amended as follows:

1. (Currently Amended) A method for producing an image, comprising the steps of:

in a computer, storing a three-dimensional image of an object as a volume dataset and segmenting a curved surface of the stored three-dimensional image;

transforming the volume dataset and the segmented surface ~~to transform~~ by computationally uncurving and flattening the segmented curved surface into a plane; and

displaying the three-dimensional image in a display presentation and, in said display representation, representing the transformed curved surface of the three-dimensional image ~~with~~ as a planar slice of a predetermined thickness, coplanar with said plane at at least one location selected in said display presentation from the group consisting of inside the three-dimensional image and outside of the three-dimensional image.

2. (Previously Presented) A method as claimed in claim 1 wherein said three-dimensional image comprises a plurality of consecutive computed tomography slice images, with image data for each slice image being described with Cartesian coordinates, and wherein the step of segmenting the curved surface of the three-dimensional image comprises:

performing a coordinate transformation for each slice image to polar coordinates relative to a line extending through the three-dimensional image that is oriented substantially perpendicularly to the slice images;

determining contours that are imaged in each transformed slice image and allocated to the surface of the three-dimensional image;
transforming the pixels of the contours back into the coordinate system of the volume dataset; and
re-extracting pixels along said contours for representing the surface of the three-dimensional image, after transformation of the image into the plane, with said slice of predetermined thickness.

3. (Original) A method as claimed in claim 1 comprising employing an image of at least a part of a living subject as said three-dimensional image, and wherein said surface is a body surface of the living being.

4. (Original) A method as claimed in claim 1 comprising selecting said subject from the group consisting of a bone of a living being and an organ of a living being.

5. (Original) A method as claimed in claim 1 comprising orienting said plane along a line of sight toward said three-dimensional image.

6. (Original) A method as claimed in claim 1 comprising orienting said plane along a line of sight away from said three-dimensional image.

7. (Original) A method as claimed in claim 1 comprising representing image data allocated to said slice of predetermined thickness by a technique selected from the group consisting of multiplanar reformation, maximal intensity projection, minimal intensity projection, and volume rendering.

8. (Original) A method as claimed in claim 1 comprising the additional step of subjecting said image data to filtering for an image enhancement selected from the group consisting of smoothing, edge-accentuation and structure-accentuation.